

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



11 JAN 2005

(43) International Publication Date
22 January 2004 (22.01.2004)

PCT

(10) International Publication Number
WO 2004/006898 A2

(51) International Patent Classification⁷: A61K 31/00

(21) International Application Number:
PCT/DK2003/000486

(22) International Filing Date: 10 July 2003 (10.07.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
PA 2002 01092 11 July 2002 (11.07.2002) DK

(71) Applicant (for all designated States except US): SEMA
APS [DK/DK]; Willemoesgade 33, 1th, DK-2100 Copen-
hagen (DK).

(72) Inventors; and

(75) Inventors/Applicants (for US only): CHRISTENSEN,
Claus [DK/DK]; Gammel Kongevej 35E, 4th, DK-1610
Copenhagen (DK). LUKANIDIN, Eugene [RU/DK];
Willemoesgade 33, 1th, DK-2100 Copenhagen (DK).
OLSEN, Ole [DK/DK]; Skovvej 77D, DK-2920 Char-
lottenlund (DK). ALBRECHTSEN, Morten [DK/DK];
Høstvej 7, DK-2920 Charlottenlund (DK).

(74) Agent: HØIBERG A/S; St. Kongensgade 59A, DK-1264
Copenhagen (DK).

(81) Designated States (national): AE, AG, AL, AM, AT (uti-
lity model), AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA,
CH, CN, CO, CR, CU, CZ (utility model), CZ, DE (uti-
lity model), DE, DK (utility model), DK, DM, DZ, EC, EE
(utility model), EE, ES, FI (utility model), FI, GB, GD, GE,
GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ,
LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN,

MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO,
RU, SC, SD, SE, SG, SK (utility model), SK, SL, SY, TJ,
TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA,
ZM, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

— as to applicant's entitlement to apply for and be granted
a patent (Rule 4.17(ii)) for the following designations AE,
AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA,
CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES,
FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH,
PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN,
TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO
patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG,
ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU,
TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE,
DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT,
RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)
— of inventorship (Rule 4.17(iv)) for US only

Published:

— without international search report and to be republished
upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: USE OF COMPOUNDS CAPABLE OF INHIBITING THE PROTEOLYTIC PROCESSING OF SEMAPHORINS FOR
PREVENTION, TREATMENT, DIAGNOSIS AND PROGNOSIS OF AN INVASIVE DISEASE

(57) **Abstract:** The present invention relates to use of compounds directed to inhibiting expression and/or proteolytic processing
semaphorins SEMA3E and/or sema3E and/or activation of a receptor by a proteolytic product of said semaphorins for the man-
ufacture of a medicament for prevention, treatment, diagnosis and/or prognosis of an invasive disease. The invention features the
compounds selected from the group comprising antisense compounds derived from the sequence of SEMA3E and/or sema3E, peptide
compounds derived from the sequence of said semaphorins, anti-bodies against said semaphorins, and peptide compounds derived
from the sequence of Plexin A receptor. Furthermore, the invention provides methods for prognosis and/or diagnosis of malignancy of
cancer based of estimation of the levels of expression and proteolytic processing of said semaphorins in a sample of a tissue or body
fluid. The invention also concerns a method for producing an attractant polypeptide by establishing a cleavage product of SEMA3E
and/or sema3E.

BEST AVAILABLE COPY